

The Peanut Wizard

Wyoming Social Studies, Language Arts

Objectives:

- Students will understand the significance of the inventions of George Washington Carver.
- Students will discuss how the inventions of one individual have affected their lives today.

Background:

Peanuts are native to South America. The ancient Incas of Peru stashed peanuts in jars at burial sites to nourish departed spirits. Peanuts made their way to the southern colonies of North America with slaves from West Africa, who planted them as a food crop to feed themselves. They called the nut “nguba,” which was the origin of the word “goober,” one of many names for peanuts.

The peanut is now cultivated in more than forty countries on six continents. India and China produce more than half the peanuts in the world, followed by Nigeria, Senegal, the United States, Indonesia, Sudan, and Burma. In the United States, the major peanut growing states are Georgia, Alabama, North Carolina and Texas.

The peanut is not a nut but a legume, in the same family as the bean and the pea. Legumes help restore poor soils by capturing nitrogen from the air and making it available to the plants through their root systems.

Peanuts need a long growing season to produce mature seeds. They will not tolerate frost. Although they form underground, the edible portions of the plant are not tubers but seeds housed in a capsule, a nutlike shell. The plant bears yellow male flowers and inconspicuous female flowers. After fertilization, the peduncle, or flower stalk, grows long, forcing the growing seed pod underground, where it reaches maturity.

The peanut is about 28 percent protein, 50 percent fat, 18 percent carbohydrates, and 4 percent ash. Few agricultural plants have as many potential uses. In the United States, one-fourth of all edible peanuts end up in candy bars and over half are used for making peanut butter. Americans eat enough peanut butter in a year to make over 10 billion peanut butter sandwiches. At graduation, the average high school student will have consumed 1,500 peanut butter and jelly sandwiches. The average American eats about 11 pounds of peanuts a year.

Very little peanut butter is consumed outside the United States. Worldwide, about two-thirds of the peanut crop is crushed for oil. Peanut oil supplies about 8 percent of the



Standards

Social Studies

Culture/Cultural Diversity: 2.1

Time, Continuity, & Change: 4.2

People Places & Environment: 5.4

Language Arts

3rd Grade:

Reading: 1.3A 1.3F

4th Grade:

Reading: 1.3A, 1.3B,

Science

History & Nature of Science
In Personal & Social
Decisions. 1.B

Materials

- Peanuts in the shell
- Student worksheets A, B, & C
- [A Pocket Full of Goobers](#), by Barbara Mitchell, ISBN0876144741

Estimated Time

60 Minutes

Grades 3-4

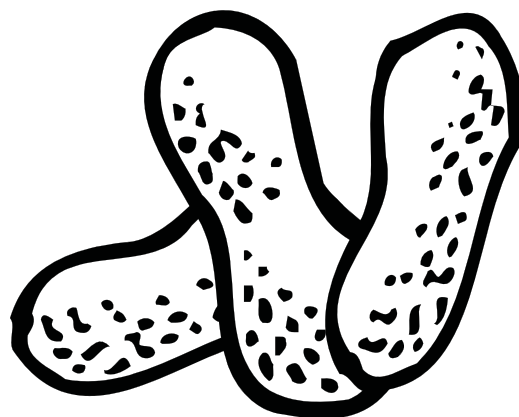
notes:

- *native*
- *nourish*
- *cultivated*
- *legume*
- *potential*
- *consumed*
- *production*
- *forage*
- *enrich*

world's edible oil production. Peanut products are used in food processing and for animal food. The peanut shell and residues left after oil pressing can be fed to animals. Plants can also be left in the ground to provide excellent forage for cattle and swine and to help enrich the soil.

Activity Procedures:

1. Hand out peanuts in the shell and let students examine them and eat them. Share background materials.
2. Hand out student worksheets. Read the information on Student Worksheet A as a class or have students read the information individually.
3. Lead the class in discussing the following questions:
 - Why did George Washington Carver stay with his owner after he was no longer a slave?
 - What is horticulture? How does this field of study relate to Carver's love of drawing flowers?
 - Why did the freed slaves have trouble earning a living from the land they were working?
 - How do peanuts improve the soil?
 - Why did Carver have to find ways to use peanuts?
 - How did the boll weevil persuade Southern farmers to start planting peanuts?
 - Have you personally benefitted from Carver's inventions?
4. Review the outline and have students follow instructions on the student worksheets to complete the outline on Student Worksheet C.



Adapted from Oklahoma Agriculture in the Classroom.

Name _____

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George Washington Carver was born a slave on a Missouri farm. He was freed at the end of the Civil War, while he was still a child, but since he was an orphan, he grew up in the household of his former owner. He went to a one-room school for black children nine miles from his home.

In 1889, Carver enrolled at Simpson College in Iowa. He earned his \$12 yearly tuition by working as a cook. Carver loved to draw flowers. He wanted to be an artist, but he decided to study *horticulture* instead. In 1896, he earned a master's degree at Iowa State Agricultural College.

That same year Booker T. Washington asked him to go to work as head of the Department of Agriculture at Tuskegee Institute in Alabama. In the South, slaves had been freed but now had no way to support their families. Freed slaves worked long hours in cotton fields that were too worn out to produce crops. The goal of the institute was to teach people how to grow better crops.

The Tuskegee Institute was located on an abandoned cotton plantation. Great *gullies* cut deep into the land. The *topsoil* had blown or washed away. Much of the farming land of the South was in the same condition, worn out by many years of poor agricultural practices.

Carver began looking for ways to improve the soil. He experimented with *legumes*. Legumes are good for the soil, because they capture *nitrogen* from the air and make it available to the soil. Peanuts are legumes and grow well in the South. Carver found that peanuts did an excellent job of improving the soil.

The next step was finding uses for peanuts. Until then peanuts had been considered "circus chaw," containing little or no food value.

In 1897, George Washington Carver began experimenting with peanuts. He found ways to use peanuts in cereals, oils, dyes, soaps and many other things. In all he found over 300 uses for the peanut.

In 1892, the *boll weevil* crossed the Rio Grande from Mexico into Texas and wiped out the few cotton crops that remained in the South. In desperation, Southern farmers began listening to Carver's advice and started growing peanuts. The peanut crop was a huge success. By 1940, the South boasted a \$250 million industry revolving around the peanut. Today the annual harvest is worth \$3 billion.

Carver went on the road with his findings. He traveled to farmsteads belonging to black farmers to show them how to enrich the soil and how to plant and care for peanuts, soybeans, sweet potatoes, greens and other vegetables.














His fame as a scientist and educator grew throughout the world. When he died at Tuskegee, on June 5, 1943, he was one of America's most honored scientists.

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Read the information on Student Worksheet A. Then, copy the following statements in their proper places in the outline on Student Worksheet C.

-  The Tuskegee Institute was located on an abandoned cotton plantation.
-  Carver traveled throughout the South to show Black farmers how to enrich the soil and how to plant and care for their crops.
-  George Washington Carver studied horticulture at Simpson College in Iowa.
-  Southern farmers began planting peanuts after the boll weevil damaged the remaining cotton crops.
-  Carver went to school in a one-room school for Black children nine miles from his home.
-  Booker T. Washington hired Carver to head the Department of Agriculture at Tuskegee Institute in Alabama.
-  George Washington Carver was born a slave on a Missouri farm.
-  The goal of the Tuskegee Institute was to teach freed slaves to grow better crops.
-  Poor soil conditions on land owned by the Tuskegee Institute was similar to soil conditions all over the South.
-  Carver grew up in the home of his former owner because he was an orphan when he was freed.
-  Carver first began studying peanuts as a way to improve the soil.
-  George Washington Carver earned a master's degree from Iowa State Agricultural College.
-  Carver's next step was finding more uses for peanuts.

Name _____

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I. Early Life of George Washington Carver

A. Childhood

1. _____

2. _____

B. Education

1. _____

2. _____

3. _____

II. Tuskegee Institute

A. _____

B. _____

C. _____

D. _____

III. Peanut Research

A. _____

B. _____

C. _____

D. _____

IV. Getting the Word Out

A. _____

